Thank you for purchasing our product.
Please read this user's manual before using the product.
Change without notice

4/8/16 CH Analogue HD-AHD DVR Quick Guide

Default User name / Password
User Name : admin
Password : 123456

CAUTION

- **Please read this user manual carefully to ensure that you can use the device correctly and safely**

- **We do not warrant all the content is correct. The contents of this manual are subject to change without notice**

- **This device should be operated only from the type of power source indicated on the marking label. The voltage of the power must be verified before using. If not in use for a long time, pull out the plug from the socket**

- **Do not install this device near any heat sources such as radiators, heat registers, stoves or other device that produce heat**

- **Do not install this device near water. Clean only with a dry cloth**

- **Do not block any ventilation openings. And ensure well ventilation around the machine**

- **Do not power off the DVR at normal recording condition! The correct operation to shut off DVR is to stop recording firstly, and then select "shut-down" button at the right of the menu bar to exit, and finally to cut off the power.**

- **This machine is indoor using equipment. Do not expose the machine in rain or moist environment. In case any solid or liquid get into the machine's case, please cut off the power supply immediately, and ask for qualified technicians to check the machine before restart**

- **Refer all servicing to qualified service personnel. No any parts repaired by yourself without technical aid or approval.**

- **This manual is suitable for 4/8/16-channel digital video recorders.**

Main Features

COMPRESSION FORMAT
- Standard H.264 compression with low bit rate and better image quality

LIVE SURVEILLANCE
- Supports HDMI/ VGA output
- Supports channel security by hiding live display
- Display the local record state and basic information
- Supports USB to make full control

RECORD MEDIA
- Supports one SATA HDD to record for a longer time without any limitation

BACKUP
- Supports USB 2.0 devices to backup
- Supports external SATA DVD writer to backup
- Supports saving recorded files with AVI standard format to a remote computer through internet

RECORD & PLAYBACK
- Record modes: Manual, Schedule, Motion detection recording
- Supports recycle after HDD full
- Resolution, frame rate and picture quality are adjustable
- 4/8/16 CH 720P recording
- 1 audio channel available
- Three record search modes: time search, event search and image search
- 4/8/16 channels playback simultaneously
- Supports deleting and locking the recorded files one by one
- Supports remote playback in Network Client through LAN or internet

ALARM
- Supports schedule for motion detection
- Supports pre-recording and post recording

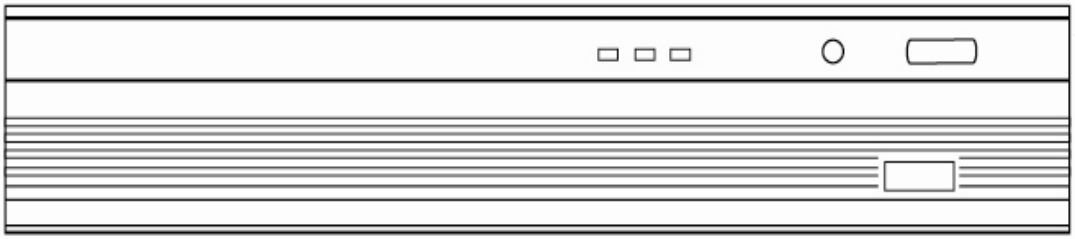
PTZ CONTROL
- Supports various PTZ protocols
- Supports 128 PTZ presets and 8 auto cruise tracks
- Supports remote PTZ control through internet

SECURITY
- Customize user right: log search, system setup, two way audio, file management, disk management, remote login, live view, manual record, playback, PTZ control and remote live view
- Supports 1 administrator and 63 users.
- Supports event log recording and checking, events unlimited

NETWORK
- Supports TCP/IP, DHCP, PPPoE, DDNS protocol
- Supports IE browser to do remote view
- Supports setup client connection amount
- Supports dual stream. Network stream is adjustable independently to fit the network bandwidth and environment.
- Supports picture snap and color adjustment in remote live
- Supports remote time and event search, and channel playback with picture snap
- Supports remote PTZ control with preset and auto cruise
- Supports remote full menu setup, changing all the DVR parameters remotely
- Supports mobile surveillance by phones with iPhone, Android
- Supports CMS/NVMS to manage multi devices on internet

1.Front Panel Instructions

***Notice**: The pictures are only for reference; please make the object as the standard.*

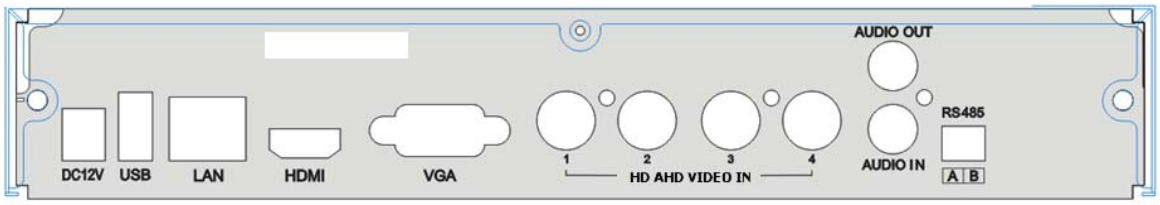


Front Panel

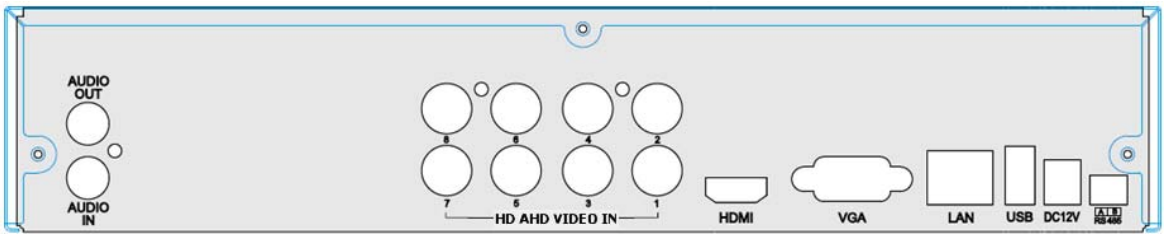
***Notice**: The pictures are only for reference; please make the object as the standard.*

Name	Description
IR Receiver	Receive IR remote control signal
Fn	VGA and CVBS monitor switch

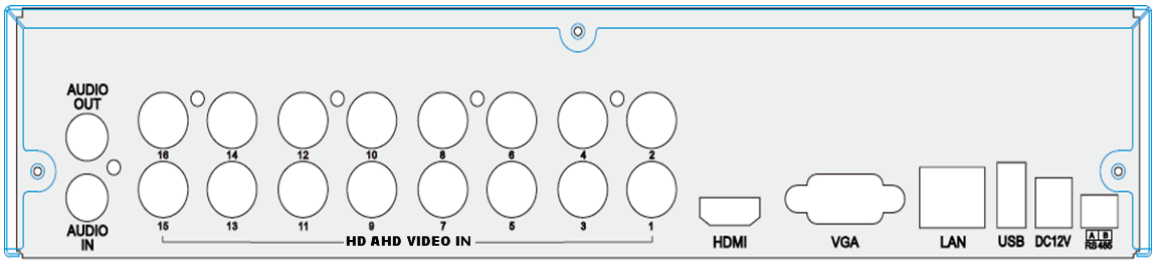
1.3 Rear Panel Instructions



Rear Panel for 4 CH



Rear Panel for 8 CH



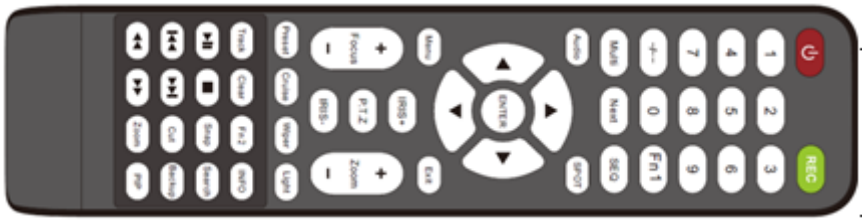
Rear Panel for 16 CH

Name	Descriptions
DC12V	DC12V Power Input.
USB	To connect external USB devices like USB mouse or USB storage device.
LAN	Network Port.
HDMI	HDMI Port. Connect to high-definition display device.
VGA	VGA Port. Connect to monitor.
HD AHD VIDEO IN	4 / 8 / 16 CH HD AHD Video Inputs.
AUDIO OUT	Audio output, connect to the sound box.
AUDIO IN	1 CH Audio Input.
RS485	Connect to keyboard or speed dome; A is TX +; B is TX-.

Remote Controller (Optional)

It uses two AAA size batteries.

- Open the battery cover of the Remote Controller.
- Place batteries. Please take care of the polarity (+ and -).
- Replace the battery cover.



Remote Controller

Button	Function
Power Button	Switch off—to stop DVR. Use it before turning off the power
Record Button	To record manually
-/-- /0-9 Digital Button	Input number or choose camera
Fn1 Button	Unavailable temporarily
Multi Button	To choose multi screen display mode
Next Button	To switch the live image
SEQ	To enter into auto dwell mode
Audio	To enable audio output in live mode
Switch	To switch the output between BNC and VGA
Direction button	To move cursor in setup or pan/title PTZ
Enter Button	To confirm the choice or setup
Menu Button	To enter into menu
Exit Button	To exit the current interface
Focus/IRIS/Zoom/PTZ	To control PTZ camera. Move camera/zoom/IRIS/Focus
Preset Button	To enter into preset setting in PTZ mode
Cruise Button	To enter into cruise setting in PTZ mode
Track Button	To enter into track setting in PTZ mode
Wiper Button	To enable wiper function in PTZ mode
Light Button	To enable light function in PTZ mode
Clear Button	To return to the previous interface
Fn2 Button	Unavailable temporarily
Info Button	Get information about DVR like firmware version, HDD information
	To control playback. Play/Pause/Stop/Previous Section/Next Section/Rewind/Fast Forward
Snap Button	To take snapshots manually
Search Button	To enter into search mode
Cut Button	To set the start/end time for backup in playback mode
Backup Button	To enter into backup mode
Zoom Button	To zoom in the images
PIP Button	To enter into picture in picture setting mode

3.Startup and Shutdown

Startup

Step1: Connect with the source power.
Step2: The device will boot and the power LED would turn blue.
Step3 A WIZARD window will be pop-up

Shutdown

You can shut down the device by using IR remote controller and mouse.

By IR remote controller:

Step1: Press Power button, the shutdown window will appear, click OK, the unit will shut down after a while.
Step2: Disconnect the power

By mouse:

Step1: Right click on the mouse, then select “Main Menu” the shutdown window will appear at the last
Step2: Click OK. Then the unit will power off after a while.
Step3: Disconnect the power

4.Wizard setup

After the device starts, a setup wizard pops up. You can set up time，network and disk management.

Click device name box to popup a keyboard as follow:

It supports digits, alphabets and symbols as inputs. Click Shift button to input Capital letters and symbols; click Shift button again to return.

The default HTTP port is 80. The default server port is 6036. You can check “Obtain an IP address automatically to acquire network information or input IP address, subnet mask, gateway, preferred/alternate DNS server manually. This function is used to monitor DVR through internet

Click Next button. This will take you to the HDD management window.

Record stream

Please setup rate, resolution, quality, encode and max bit stream

Note: if the rate value set is over high the maximum resources of the device, the value will be adjusted automatically.
Definitions and descriptions of Record stream:

Parameter	Meaning
Rate	720P: 1-30（NTSC）/1-25(PAL)
Resolution	This series supports 720P, 960H
Quality	The higher the value is, the clearer the recorded image is. Six options: lowest, lower, low, medium, higher and highest.
Encode	VBR and CBR.
Max bit stream	You shall adjust it subject to the actual network condition.

WIZARD
ID Type Size[GB] Free[GB] Status Properties Source
01 SATA 465.76 441.13 Normal Read & Write Local
Refresh Format
Prev Finish Exit

You can check your HDD information through this tab. If your HDD was recently installed, select the HDD from the list to format it.

Click on Exit to leave the wizard

5.Login

You can login or log off the DVR system. Once logged off you cannot do any other operation except changing the multi-screen display.
After you exit the wizard setup, you can login to the DVR.

Login

Notice: The default user name and password is “admin” and 123456”

APPENDIX A Compatible Devices

1. Compatible USB drive after test.

Brand	Capacity
A-DATA	512MB, 1G, 2GB
Transcend	4GB
Kingston	2GB
Toshiba	2GB
SanDisk	4GB

2. Compatible external USB CD/DVD writers after test

Brand	Model
LG	GH24NS90

3. Compatible HDD

Brand	Model number	Capacity
WESTERN DIGITAL	1600AAJS FW:00L7A0	160GB
	2500AVVS FW:73M8B0	250GB
	3200AVVS	320GB
	5000AVJS FW:63YJA0	500GB
	5000AVVS FW:63M8B0	500GB
	5000AAKS FW:00V1A0	500GB
	5000BUDT (2.5") FW:63G8FY0	500GB
	5000AUDX FW:63WNHY0	500GB
	10EURS FW:630AB1	1TB
	10EVDS FW:63U8B0	1TB
	15EARS FW:00Z5B1	1.5TB
	15EURS FW:63S48Y0	1.5TB
	20EVDS FW:63T3B0	2TB
	20EARS FW:00S8B1	2TB
	2001FASS FW:00U0B0	2TB
HITACHI	HDS721616PLA380	160GB
	HCT721025SLA380	500GB
	HCP725050GLA380	500GB
	HDP725050GLA360	1TB
SEAGATE	ST500DM002 (SATA3) FW:KC44	500GB
	ST3100528AS FW:CC38	1TB
	ST31000524AS (SATA3) FW:JC4B	1TB
	ST2000DL003 (SATA3) FW:CC32, CC3C	2TB
TOSHIBA	HCS5C1050DLE630 FW:620 DT01ABA050V	500GB
	DT01ABA100	1TB
	DT01ACA100	1TB

APPENDIX B Calculate Recording Capacity

Users can calculate the required size of hard disk according to the total recording duration and DVR recording settings. The DVR uses fixed video bit rate. The below are the details at different settings for CBR.

Resolution	Frame Rate Totally(FPS)	Video Quality	Bit Rate (kbps)	Used Space(MB/h)
720P	25(PAL)/ 30(NTSC)	Highest	6144	2700
		Higher	5420	2250
		Medium	4096	1800
		Low	3072	1350
		Lower	2048	900
		Lowest	1024	450

The calculation format is: **Total Recording capacity =Used space per hour (MB/h) (coverage rate of hard disk) × recording time (hour) × channel numbers**
For instance, one customer uses NTSC cameras, set resolution to 720P, video quality to Lowest, frame rate to 30 fps for enabling total 4 channels. He wants the unit to record continuously in a month. Below is the calculation:

Total Recoding capacity =450 (mb/h) X 24(hours/day) X30(days) X4(channels)= 1296000 (MB)≈1266(GB)

Therefore, you need to install one 2 TB SATA HDDs for recording in one month.

APPENDIX C SPECIFICATIONS

4 CH Specifications

Compression format	H.264 Main Profile
Video output	VGA × 1, HDM I× 1
Video Input	BNC × 4
HDMI/VGA Resolution	1080 × 1920/1280 ×1024/ 800 × 600
Record Resolution	720P (1280 × 720) 960H (960× 480)
Display Frame Rate	100FPS (PAL), 120FPS (NTSC)
Record Frame Rate	720P/960H: 100FPS (PAL), 120FPS (NTSC)
Audio Input	RCA × 1
Audio output	RCA × 1
Record Mode	Manual / Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485, USB2.0 × 2 (one for backup, another for USB mouse)
Disk info	SATA × 1
Remote controller	YES
Power consumption	< 9W(without HDD)
Power Supply	DC12V
Temperature	0℃-50℃
Humidity	10%-90%

8 CH Specifications

Compression format	H.264 Main Profile
Video output	VGA × 1, HDM I× 1
Video Input	BNC × 8
HDMI/VGA Resolution	1080 × 1920/1280 ×1 024/ 800 × 600
Record Resolution	720P (1280 × 720) 960H (960× 480)
Display Frame Rate	200FPS (PAL), 240FPS (NTSC)
Record Frame Rate	720P/960H: 200FPS (PAL), 240FPS (NTSC)
Audio Input	RCA × 1
Audio output	RCA × 1
Record Mode	Manual / Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485, USB2.0 × 2 (one for backup, another for USB mouse)
Disk info	SATA × 1
Remote controller	YES
Power consumption	< 14W(without HDD)
Power Supply	DC12V
Temperature	0℃-50℃
Humidity	10%-90%

16 CH Specifications

Compression format	H.264 Main Profile
Video output	VGA × 1, HDM I× 1
Video Input	BNC × 16
HDMI/VGA Resolution	1080 × 1920/1280 ×1 024/ 800 × 600
Record Resolution	720P (1280 × 720) 960H (960× 480)
Display Frame Rate	200FPS（PAL）, 240FPS （NTSC）
Record Frame Rate	720P/960H: 200FPS（PAL）, 240FPS（NTSC）
Audio Input	RCA × 1
Audio output	RCA × 1
Record Mode	Manual / Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485, USB2.0 × 2 (one for backup, another for USB mouse)
Disk info	SATA × 1
Remote controller	YES
Power consumption	< 20W(without HDD)
Power Supply	DC12V
Temperature	0℃-50℃
Humidity	10%-90%